DEVELOPING ORAL PRESENTATION BASED ON SCIENTIFIC APPROACHES TO IMPROVE STUDENTS' SPEAKING SKILLS

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Abstract

Penelitian ini bertujuan i) untuk mengetahui perbedaan kemampuan berbicara siswa antara siswa yang diajar dengan oral presentasi berdasar pada pendekatan saintifik dan oral presentasi konvensional dan juga ii) untuk mengetahui aspek apa yang secara signifikan meningkat di kemampuan berbicara siswa antara kelas control dan kelas eksperimen. Subjek penelitian ini adalah siswa kelas satu SMA Muhammadiayh 2 Bandar Lampung. Hasil penelitian menunjukkan bahwa i) ada perbedaan yang signifikan secara statistic antara oral presentasiyang berdasar pada pendekatan saintifik dan oral presentasi konvensional, ii) Berdasarkan padanilai gain dari setiap aspek berbicara, aspek pemahaman secara signifikan meningkat setelah diajarkan menggunakan oral presentasi berdasar pada pendekatan saintifik. Ini menunjukkan bahwa oral presentasi yang berdasar pada pendekatan saintifik lebih efektif untuk meningkatkan kemampuan berbicara siswa daripada oral presentasi konvensional.

This study was aimed i) to find out the significant difference of students' speaking achievement between oral presentation based on scientific approaches and conventional oral presentation and also ii) to find out what aspects of speaking significantly improve between control class and experimental class. The subjects of this research were the second grade of SMA Muhammadiyah 2 Bandar Lampung. The result shows that i) there was a statistically significant difference of students' speaking achievement between oral presentation based on scientific approaches and conventional oral presentation, ii) Based on the gain score of each aspects of speaking, the comprehension aspect is significantly improve after taught using oral presentation based on scientific approaches. It can be said that oral presentation based on scientific approaches is more effective to improve the students speaking achievement than conventional oral presentation.

Keywords: *Oral Presentation, Scientific Approach, Speaking Achievement*

INTRODUCTION

Speaking is very important because speaking and human being cannot be separated from each other. Speaking is used to express their ideas and to communicate to people in civilized world. Richards (2008) states that in speaking, we tend to be getting something done, exploring ideas, working out some aspects of the world, or simply being together. If the students can speak English fluently that can help them to easy communicate and also explore their idea.

The aim of speaking in a language context is to promote communicative efficiency; teachers want students to actually be able to use the language as correctly as possible and with a purpose. Students often value speaking more than the other skills of reading, writing and listening so motivation is not always as big of an issue, but what often happens is students feel more anxiety related to their oral production.

Speaking seems intuitively the most important skill to master. The success is measured in terms of the ability to carry out conversation in language speaking in an interactive process of constructing meaning that involves producing, receiving, and processing information. Speaking is very important because by mastering speaking skill, people can carry out conversation with others, give the ideas and exchange the information with others. In speaking, students should master the elements of speaking, such as vocabularies, pronunciation, grammar, and fluency. As a foreign learner in Indonesia, many students have amount vocabularies and mastering the grammatical structure but they still have difficulty in speaking. Hedge (2000) states that the ability to communicate is the most important goal that communicative language teaching aims to reach. It is to be able to operate effectively in the real world.

Moreover, According to Harmer (2007), human communication is a complex process. Persons need communication when they want to say something and transmit information. Speakers use communication when they are going to inform someone about something. Speakers apply language according to their own goals. So speakers should be both listeners and speakers at the same time for the effective communication. It can be said that the speaker must consider the person who they are talking to as a listener.

Many foreign language learners find speaking as one of the most difficult in learning a language. It is because the students seldom practice their skill to speak. They are not confident even they have ability to speak, even though speaking is where we share out information and idea to communicate with each other. They are generally facing problems to use the foreign language to express their thoughts effectively. They stop talking because they face psychological obstacles or cannot find the suitable words and expressions (Leong, 2017).

In the other hand, curriculum experts provide various curriculums. In general, the curriculum is a set of plans and arrangements regarding the objectives, content and learning materials. Nowadays, in senior high school, curriculum 2013 is about the scientific approaches. Scientific approach is defined as the process of finding out information in science, which involves testing the ideas by performing experiments and making decisions based on the results of analysis (Longman, 2014).

Moreover, there are so many senior high school students who are still having low skill in speaking. This case brings the ideas to find a new appropriate teaching method to improve the students' speaking ability by combining with scientific approach. There are so many previous researches that talks about improving the students' speaking ability.

To overcome the problem above, oral presentation in scientific approach is one of ways to conduct their speaking. According to Baker (2000), oral presentation is like a formal conversation, speaking to group as a natural activity. According to Girard & Trapp (2011), the potential benefits of students' oral presentations include: greater class interaction and participation, increased interest in learning, new perspectives not covered otherwise, improvement in communication and presentation skills. Oral presentations represent an opportunity for developing real-world communications as well as leadership skills (King, 2002).

There are also some previous researches discuss about oral presentation and scientific approach in speaking. First, a research conducted by Djamrun (2009), Analysis of the Student's speaking disfluency in oral presentation. The result showed that repetition is one of disfluencies that mostly done by students in their presentation. From this research, it can be seen that oral presentation can stimulate them to produce more words in delivering the ideas although the students are hard to speak up.

Second, the research is about the use of Oral presentation technique to improve speaking skill which conducted by Laili (2015). In conclusion, oral presentation as the technique in teaching and learning is effective to improve students' public speaking skill.

Third, the research is conducted by Biantoro (2014) which carried about scientific approach. The title is Using Scientific Approach to Improve the Speaking Performance and Participation of the Tenth Grade Students at SMK Negeri 12 Malang. The results of the study, through well-designed scientific approach steps and activities, the speaking performance and participation of the students could be improved significantly.

Based on the result of studies, it can be seen that all researches prove that oral presentation and scientific approach are good to be implemented for students' linguistics development. However, viewed from previous studies, the process of how students improve their speaking by using oral presentation based on scientific approaches has not been well explored. In this case, the use of scientific approach is to minimize the problems in oral presentation technique.

From the problem above, the researcher proposes oral presentation through scientific approaches in teaching learning process. With the problem in which the students still have lack skills in speaking, the researcher combines oral presentation by using scientific approaches to improve the students speaking achievement. By developing oral presentation based on scientific approaches, the researcher assumes that it can improve the students' speaking achievement in experimental class. He also would implement conventional oral presentation as the original technique to the control class.

Therefore, the researcher was interested to investigate the significant difference of students' speaking achievement between oral presentation based on scientific approaches and conventional oral presentation. The researcher would also investigate what aspects of speaking significantly improve between control class and experimental class.

METHOD

This research used true experimental design is a form of experimental research in which individuals are randomly assigned to groups (Cresswel, 2014). In this design, it comprised of pre test, treatment and post test. In the pre and post test, the researcher distributed speaking test in both experiment and control group to measure the students' speaking skills. Then, the treatments applied in experiment class only. He taught the students by using Oral Presentation in scientific approach technique in order to promote students' speaking achievement.

The population of this research was the second grade students of SMA Muhammadiyah 2 Bandarlampung. The research took two classes in the school as the sample. They were XI IPA 1 and XI IPA 2. For the data collection instrument, the researcher uses interview as the speaking test. The students' scores were analyzed by using t-test of SPSS 25 program.

RESULTS AND DISCUSSION

Independent group t-test on SPSS version 25 was used to analyze the difference in students' speaking achievement between students who are taught oral presentation based on scientific approaches and conventional oral presentation as the original technique.

Table 1. Students' achievement in general

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means								
											95% Confidence Interval of the Difference	
		F	Sig.	t-ratio	t-table 0.05	t-table 0.01	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Gain	Equal variances assumed	.720	.399	4.170	1.995	2.650	68	.033	6.60	3.04	.531	12.66
	Equal variances not assumed			4.170			66.76	.034	6.60	3.04	.529	12.67

The table above showed that the gain of the students' achievement in control class is 9.02 and the gain of experimental class is 15.62 with difference 6.60. We can see that t-ratio is 4.170 while the critical value for t-table (df=68) is 1.995 at the level of significance 0.05 and 2.650 at 0.01 in 2 tailed. It indicates that t-ratio is higher than t-table that is $1.995 < 4.170 > 2.650$. The students' scores significantly differ between control class and experimental class. Thus, it clearly shows that the proposed alternative hypothesis (H_i1) is accepted that there is a significant difference of students' speaking achievement between oral presentation based on scientific approaches and conventional oral presentation.

Moreover, conventional oral presentation provides some steps that could be followed easily by the students. Yet, there were still some weaknesess. So, the students who were taught by it performed less than the students in experimental class. It was because the implementation of conventional oral presentation did not facilitate many inputs for the students in preparing students materials before

delivering in front of all students. This finding confirmed Biantoro (2014) which carried about scientific approach. Through well-designed scientific approach steps and activities, the speaking performance and participation of the students could be improved significantly. It means that the use of scientific approach can minimize the problems in oral presentation.

While, along the treatment in experimental class, the researcher noticed that the students' speaking ability after being taught through oral presentation based on scientific approaches increased slightly.

The Use Scientific Approach in the 2013 Curriculum

Scientific approach is one of the learning approaches promoted by the 2013 Curriculum. This approach also emphasizes on process of searching knowledge and students as subject of learning through applying science principles.

Since learning is a search for meaning, learning objectives should be established that connect to important issues for the student. In addition, scientific approach in learning process means learning process which is organized to make learners actively construct concepts, laws, or principles through activities of observing, hypothesizing, collecting data, analyzing data, drawing conclusion, and communicating the concepts, laws, and principles found (Hosnan, 2014). It is expected to encourage students searching knowledge from multisource through observation and not to be given by teachers only. Scientific approach also emphasizes on communicating skill as well as scientific principles.

The Process of Teaching Speaking in Experimental Class

The stages of learning in scientific approach in the 2013 Curriculum context generally are divided into five main stages. They are observing, questioning, experimenting, associating, and communicating. (Abidin, 2014). In this case, the use of oral presentation in scientific approach is made to promote the students' speaking achievements.

Observing

In this stage, teacher contextualizes learning activity for students in the classroom. In the first stage of observing, students are getting input by watching a video that contain material or example of oral presentation. During watching a video, the students observes the segmental sound especially stop consonants which used by the speakers in this video. The students can take notes how to speak stop consonants by imitating the character on video.

Then, students also learn how to use present tense in delivering message or information to the class. The focus of grammar in this learning is in using present tense. It continues with students observe the vocabulary used based on the video that they watch. It makes the students learn what is example of the vocabularies used in delivering messages. The students also can take a note to make the students easy to understand and remembering the vocabularies. Then, the students observe how to express and ask for opinions based on the video and observing the purpose of delivering material in example video (oral presentation) to find the main ideas of the material. It indicates the use of the observing is for study from real object systematically.

It is in line with Hosnan (2014) states that observing is "a deliberate and systematic activity to study a social phenomenon or real object through utilization of the five senses" and involving descriptive skill (Halonen, et al., 2003, cited in Mutaqqin, 2015).

Questioning

Questioning is the process of constructing knowledge in form of concepts of social function in particular material, procedure of structure text through group discussion or class discussion (Abidin, 2014). Based on the regulation of Ministry of Education and Culture (Permendikbud No 81a, 2013) in this stage, students pose questions from what have been observed in the previous stage for gaining more information and comprehension about the material.

It can be seen that the teacher helps the students to focus on asking how to present the material well, asking segmental sounds, asking present tense that they used, asking vocabulary what they learnt based on the video, asking how to express opinions and also asking the purpose of what people say on the video. The processes of asking are very important in gaining more information for the students in learning. The questions in this stage also require criteria of good question. Thus, in this stage, students pursue their own knowledge to construct a concept, principle, procedure, theory or law of the material learned. It can be obtained through classroom discussion, or group discussion (Abidin, 2014).

Experimenting

The third stage is experimenting. In this stage, students get real or authentic learning, for example they have to do experiments. Experimenting might be started by visiting new places, try new thing, seek information through various sources. It is intended to develop the ability to communicate and collect information through various sources. The teacher provides learning sources, worksheets, media or experiment tools. Therefore, the roles of teacher in this stage are as director and as the controller who plan and manage the activity of collecting data and its process (Brown, 2001).

Associating

The fourth stage is associating. Associating is the ability to analyze and associate the information occurred within the group. In this stage, pair students and teacher are engaged into learning activities, such as text analyzing, and categorizing. The information or data that have been collected from the previous activity, experimenting, must be analyzed to draw conclusions. Students then process the information from pair and the teachers to draw the conclusions out of that information. As stated on the Policy of Indonesia Ministry of Education and Culture No. 81a/2013, associating process must through: (1) processing information that has been collected from the result of experimenting and observing activity and, (2) processing the information collected to find solutions from to the contrary.

Communicating

The last stage is communication. In this stage, students communicate, demonstrate, and publish their learning product as a form of collaborative learning in which they face various changes. In collaborative learning, the learners interact with empathy, mutual respect, and receive a deficiency or excess, respectively in order to create social interaction to gain meaningful learning (Wahyudin, 2015).

In this stage, teacher holds role that provides correct information and the reciprocal scaffolding (Brown, 2001). This can be done through dialogue and discussion between teachers with the students. Thus communicating stage is in which students report or deliver the results of the observing, experimenting and concluding based on the result of the analysis orally or written or in other forms to let others know what learners have learned (Abidin, 2014)

Different teaching methods give different result in teaching. Therefore, applying correct technique will influence the success of students' learning process. One of the techniques that are good to teach speaking is oral presentation based on scientific approaches. This technique requires the students to enhance students' speaking in a certain situation through scientific processes. There should be someone else to help finish the activities by giving other students to speak up and asking questions to dig more information from the presenter. In getting information, the students have to clarify and negotiate meaning, solve problems, and make decisions in asking question to the presenter.

In conclusion, Oral Presentation based on scientific approaches as new technique has more advantages on students' speaking achievement than conventional oral presentation.

Table 2. Difference of Speaking Aspects between experimental and control class

Group Statistics

Gain	Aspects	N	Gain Experimental	Gain Control	Difference	Std. Deviation	Std. Error Mean
	Grammar	35	4.7	3.53	1.17	13.56	2.29
	Vocabulary	35	3.7	2.18	1.52	11.82	1.99
	Fluency	35	1.9	0.45	1.45	13.56	2.29
	Pronunciation	35	2.25	2.63	0.38	11.82	1.99
	Comprehension	35	3.05	0.25	2.8	42.59	7.41

The table above gives the explanation about the increase of students' speaking achievement in each aspect from pretest to posttest in both control and experimental class. The result in the gain can be reported as follows:

1) For **grammar**, the students still found some difficulties in using the right grammar when they were speaking in control class. They often put to be and verb in a sentence. As the example taken from the transcription *my opinion is animal circus is very bad*, while it should be *in my opinion, animal circus is very bad*. Contrary, the students in experimental class use better grammar in speaking. It can be seen from the gain score of control class in point 3.53 which is lower than experimental class that in score 4.7.

2) Then, the **vocabulary**, the students in control class was still lack of this aspect. They often spoke in Indonesian language when they are confused. For example *I think corruption sangat buruk untuk Negara*, it should be very bad for country. In the other side, experimental class has many vocabularies during speaking test. It can be seen from the gain score in vocabulary aspect that experimental class with 3.7 is higher than control class with 2.18.

3) **Fluency**, the students in Control class often stuck in delivering the opinions because lack of vocabulary, didn't know what to tell, afraid of using wrong grammar. For example they did a lot of stuck '*corruption is, corruption is a mmmhhh*. Contrary, the students in experimental class have more ideas when giving opinions in speaking test. It can be

seen from the gain score in fluency aspect that experimental class with 1.9 is higher than control class with 0.45.

4) For **Pronunciation**, the control class students sometimes mispronounced the English word. Such as *in my opinion* was read /Opiniyon/ whereas it should be /əˈpinjən/. Then the most of students also pronounced *suggest* word as /suges/, while it should be read /səˈdʒest/. In the other side, experimental class has many good pronunciations during speaking test. It can be seen from the gain score in pronunciation aspect that experimental class with 2.25 is higher than control class with 2.63.

5) **Comprehension**, there are several students in control class who still did not understand what the questions are. So, they cannot answer the questions. In the other side, experimental class has good comprehension during speaking test. It can be seen from the gain score in vocabulary aspect that experimental class with 3.05 is higher than control class with 0.25.

This finding is similar with a study done by Henelawati (2015). She implemented scientific approach to help Arjuna Vocational School Students in mastering speaking skill. The finding of her research shows that the students made an improvement in the post-test, comparing to the pre-test. Even though she did not mention the exact number of the improvement, she could conclude that the implementation of scientific approach can improve students' speaking ability. Another research conducted by Utami (2016) also concerned with the implication of scientific approach to teach speaking, but with junior high school students as the subject. The finding shows that by implementing scientific approach, 87.93% students are able to reach score above the passing grade.

Those two previous researches confirmed this research that scientific approach can be used in school to improve students' speaking capability. Speaking demands students to be well in three language features namely pronunciation, vocabulary, and grammar. It also requires the students to have good fluency and comprehension. As scientific approach has several procedures in teaching, it might help the students to mastering all five components in speaking.

Ur (2000) states that there are some ways that teacher can do in solving problems in speaking; they are: (1) use group work, (2) base the activity on easy language, (3) make a careful choice of topic and task to stimulate interest, (4) give some instruction or training in discussion skill, and (5) keep students speaking the target language. Scientific approach can summarize what Ur has stated. At first, the choice of topic has been standardized in the 2013 Curriculum. Then, in observing phase, the teacher demanded the students to work in group. In observing, they were also shown some videos using easy language. This stage, added by questioning stage, is expected to stimulate the interests of the students. In associating phase, the students need to develop their discussion skill. The teacher gave them some assignments that they have to do in group, so they should discuss with their friends how to do the tasks.

Overall in the procedure of scientific approach, the students were demanded

to keep speaking English, moreover when it came to experimenting and communicating phase.

In experimenting, students try to re-make what they have learned from the observation stage, while in communicating step, students have to communicate what the teacher demands related to the topic being learned. Students should leave their fear and hesitation behind when they, for example, present dialogues in front of the class or record their own speaking video. The researcher assumed that scientific approaches could help the students to improve students' speaking achievement.

In this research found that aspects of speaking the two techniques differ significantly is Comprehension. It obtained the highest score. It shows that they are easy to get the new vocabulary by using Oral Presentation based on Scientific Approaches. Comprehension aspect has the highest different point. It happens because the students are easy in comprehending the video during observing process and giving impact in students' speaking achievement.

The point gain of experimental class is 3.05 and 0.25 in control class. It can be seen that the difference are very high. It was because students have better preparation during the several treatments before presenting the material/topic. The process of comprehending the video is easier in experimental class than control class. The using of scientific steps in experimental class gives good impact to the students' speaking achievements.

From the result of gain scores in both control and experimental group were significance difference of speaking aspects. Oral presentation based on scientific approaches improves better students' speaking achievement. It was because students have better preparation during the several treatments before presenting the material/topic.

CONCLUSIONS

Oral Presentation based on Scientific Approaches has more advantages than conventional oral presentation in affecting students' speaking skills. In summary, having discussed the notions of this research questions above, it is ascertained that Oral Presentation based on Scientific Approaches is still one of the advocated ways to enhance the students' speaking achievement. This study believes that the better results of speaking achievement from this technique. By the use of it, it could provide the way to ameliorate the study of English as a foreign language since it is the important work of education to enhance the students' motivations and make their English achievement better.

However, the process of teaching speaking through oral presentation based on scientific approach in SMA Muhammadiyah 2 Bandar Lampung which conducted by the researcher ran successfully since it could improve the students' speaking achievement. In terms of problems faced by both teacher and the students can be information for the betterment of teaching and learning process.

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